

FIG. 1

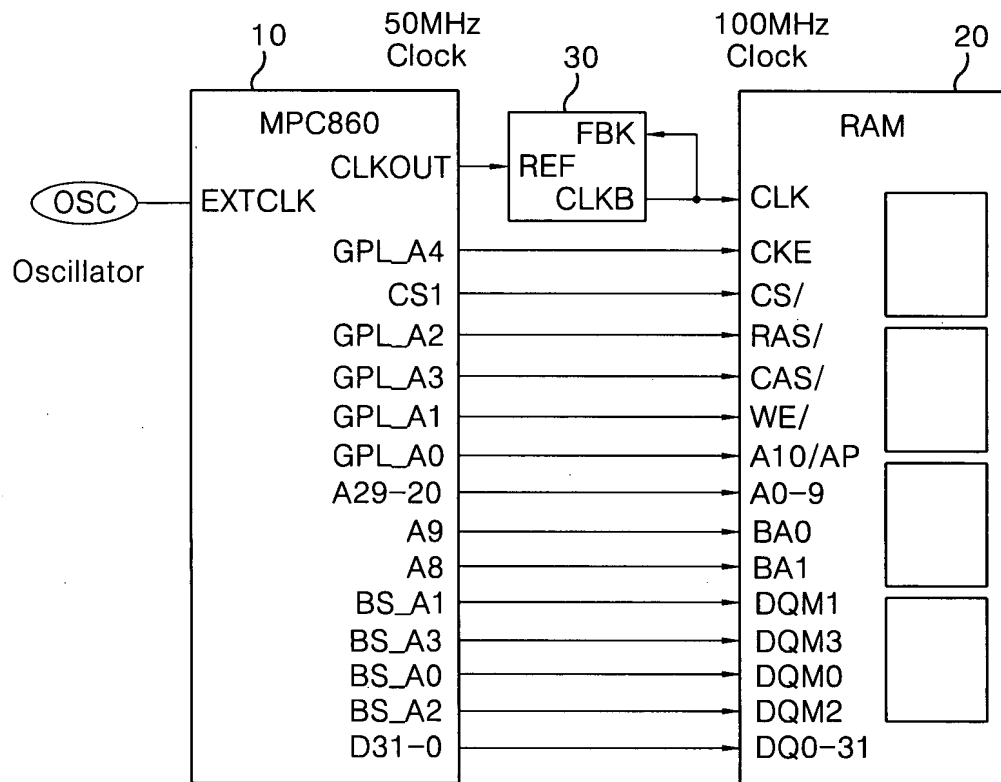


FIG. 2

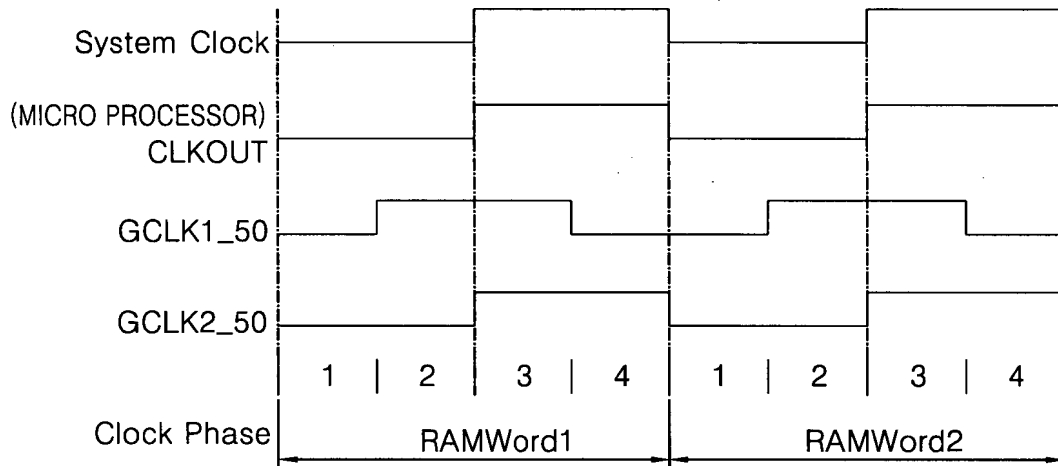


FIG. 3

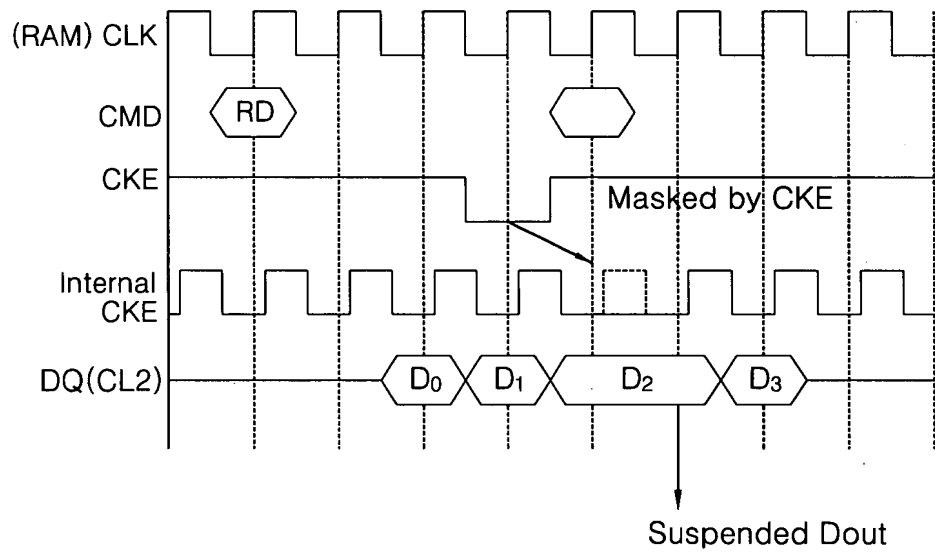


FIG. 4

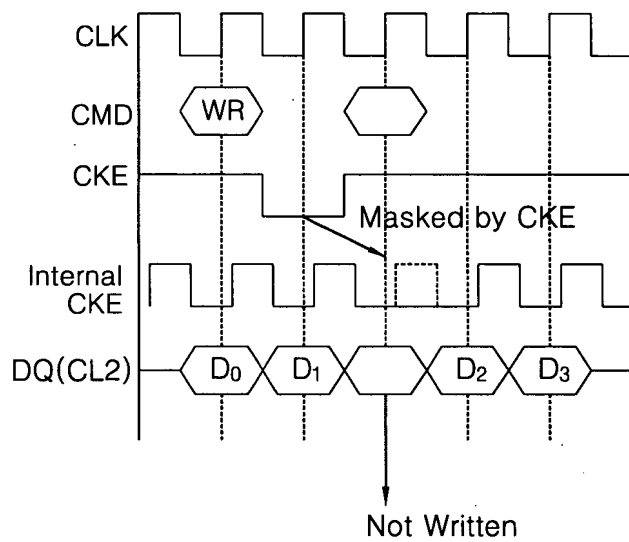


FIG. 5

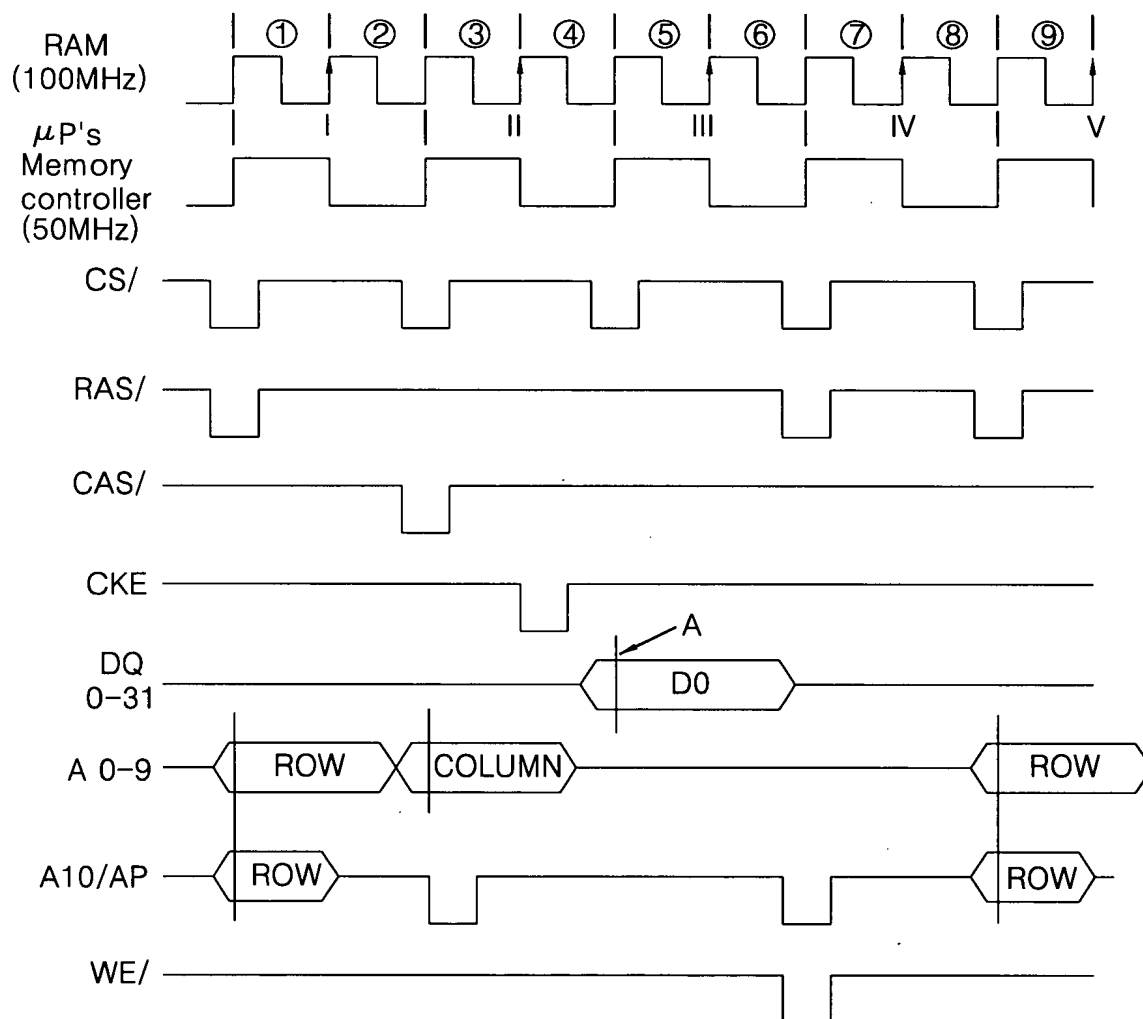


FIG. 6

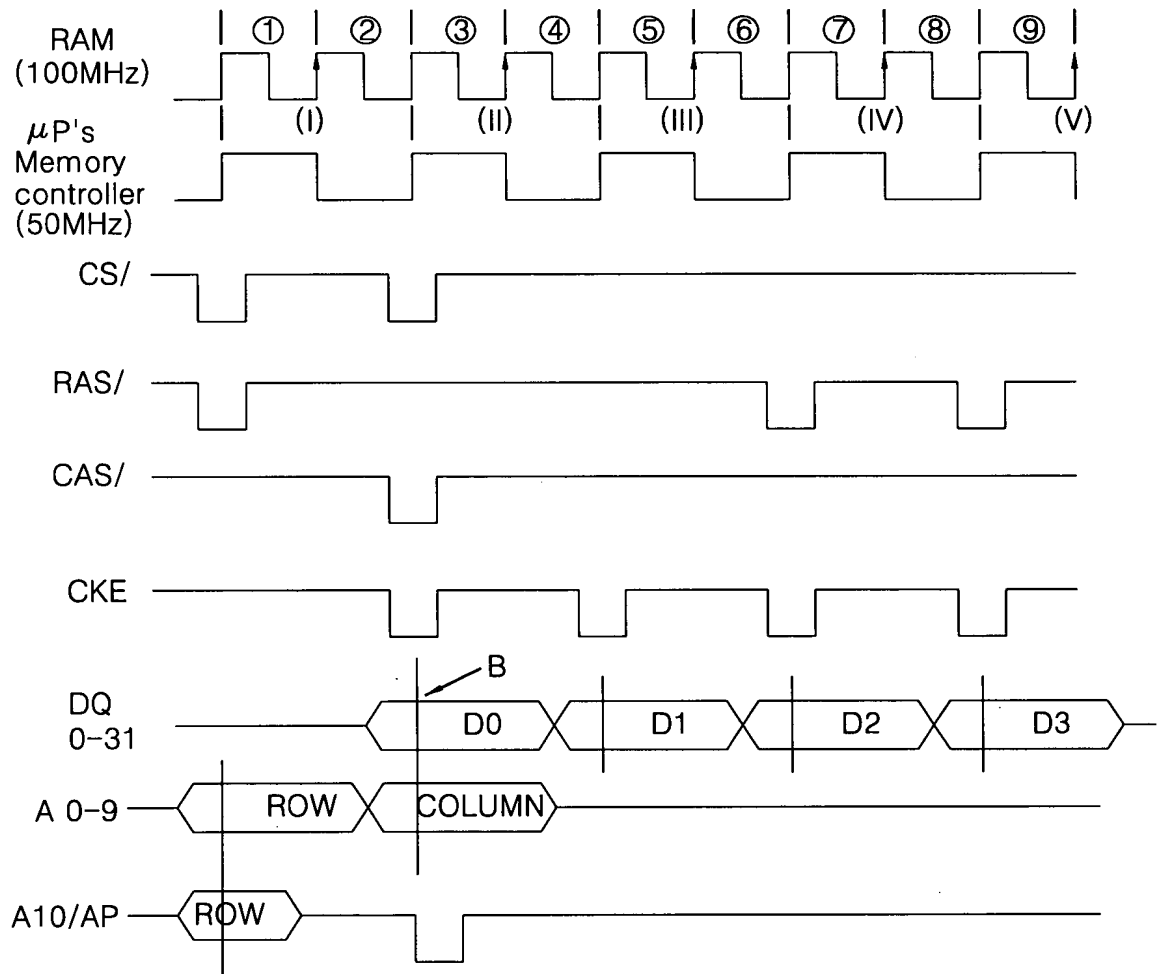


FIG. 7

THE RELATED ART METHOD				2:1 METHOD ACCORDING TO THE INVENTION				IMPROVEMENT OF PERFORMANCE	
	SDRAM LATENCY	TOTAL LATENCY TO TRANSFER DATA	MAX BANDWIDTH	SDRAM LATENCY	TOTAL LATENCY TO TRANSFER	MAX BANDWIDTH	ACCESS TIME (2:1 METHOD/ THE RELATED ART METHOD)	MAX BANDWIDTH IMPROVEMENT (%)	
CASE OF PAGE HIT	SINGLE READ	CL=2	2	4B/20ns= 200MB/s	CL=1	1	4B/10ns= 400MB/s	1/2	100%
	BURST READ	CL=2	5	16B/50ns= 320MB/s	CL=1	4	16B/40ns= 400MB/s	1/2	25%
CASE OF "NORMAL" PAGE MISS	SINGLE READ	RCD+ CL=4	4	4B/40ns= 100MB/s	RCD+ CL=2	2	4B/20ns= 200MB/s	1/2	100%
	BURST READ	RCD+ CL=4	7	16B/70ns= 229MB/s	RCD+ CL=2	5	16B/50ns= 320MB/s	1/2	40%
CASE OF PAGE MISS	SINGLE READ	RP+ RCD+ CL=6	6	4B/60ns= 67MB/s	RP+ RCD+ CL=3	3	4B/30ns= 133MB/s	1/2	100%
	BURST READ	RP+ RCD+ CL=6	9	16B/90ns= 177MB/s	RP+ RCD+ CL=3	6	16B/60ns= 266MB/s	1/2	50%